

EFFECTIVENESS OF BIRTH CONTROL

A SECOND STUDY OF CONTRACEPTIVE PRACTICE IN A SELECTED GROUP
OF NEW YORK WOMEN¹

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IN January, 1934, we published the first report on the Milbank Memorial Fund's investigation into the contraceptive practices of a group of women who attended a birth control clinic.² In that report we considered only the experience of these patients before their first visit to the clinic, and centered attention on the comparison of pregnancy rates for the time during which they used no contraceptive with those occurring when contraceptives were used.

The present report, like the first, is limited to the consideration of the period before the first clinic contact and therefore to a study of the effectiveness of untutored contraceptive practice. It differs from the first report in presenting for a sample of 991 instead of 714 women a more detailed analysis of their pre-clinic experience, which makes it possible to study their fundamental ability to conceive, as well as to determine when and how they used contraceptives. It also makes it possible to compare the relative effectiveness of different contraceptives, and of the same contraceptive as used by people with different religious affiliations.

THE GROUP STUDIED

It must be emphasized that we are not dealing with a random sample of the population, but with a highly selected group. All of

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We are also greatly indebted to Professor Raymond Pearl, The Johns Hopkins University, for his method of computing pregnancy rates and for advice given us in the course of this study.

²Stix, Regine K., M.D., and Notestein, Frank W.: Effectiveness of Birth Control. Milbank Memorial Fund *Quarterly*, January, 1934, xii, No. 1, pp. 57-68.

the 991 women studied became patients of the Birth Control Clinical Research Bureau, New York City, between January 1, 1931 and June 30, 1932. Because of the intensive nature of the study we could secure only a limited number of cases and it seemed desirable to select as homogeneous a group as possible. For this reason, we chose for study a group of women who were living in the Borough of the Bronx at the time of their first visit to the clinic, and were still living in that Borough when interviewed in their homes by one of us (R.K.S.). The Bronx population is dominated by a Russian-Jewish group, with people of Italian and Irish stock next in representation. It is not surprising, therefore, to find that 67 per cent of our families were Jewish and 17 per cent Catholic. The remaining families have been grouped together under the head of "Protestant and Other"—a subdivision which includes both Protestant families and those in which the husband and wife had differing religious affiliations.

It seems probable that women who showed enough interest in family limitation to attend a birth control clinic are more fertile than the general population from which they were drawn. This group of women had been married an average of 8.5 years and had had an average of 3.1 pregnancies and 2.3 living children. Most of them had lived in New York City since marriage, but more than 50 per cent of them were foreign-born and an additional 35 per cent were native-born of foreign parents. About 45 per cent of the families belonged to the white-collar class, largely clerical and small shopkeeper groups; 50 per cent were in the skilled and semiskilled classes and only 5 per cent in the unskilled labor class. In 1929, only 0.5 per cent of the husbands were unemployed, but by 1932 nearly 20 per cent of them were out of work. In 1929, the median income was \$2,270 and only four families were cared for by charity. By 1932, the median income had dropped to \$1,260 and 10 per cent of the families were supported by charity. Nearly 50 per cent of the women had

RELIGION	TOTAL YEARS EXPOSED	PER CENT OF TOTAL NUMBER OF YEARS EXPOSED TO RISK OF PREGNANCY				
		Total	Contra- ceptives Used	No Contraceptives Used		
				Total	Tempo- rarily	Habitually
TOTAL	6,418.5	100.0	89.4	10.6	2.3	8.2
Catholic	911.7	100.0	80.9	19.1	1.5	17.6
Jewish	4,658.5	100.0	91.5	8.5	2.6	5.9
Protestant and Other	848.3	100.0	87.3	12.7	1.8	11.0

Table 1. Proportion of total exposure to pregnancy during which contraception was used and during which none was used, for each religious group.

had more than a grammar school education but only 4 per cent had been to college.

EXTENT OF CONTRACEPTIVE PRACTICE

Ninety-six per cent of the women in our sample practiced some form of contraception before they came to the clinic. Of the total group, 43 per cent began immediately after marriage, and 83 per cent were using contraceptives before their second pregnancy. Catholic couples were apparently less willing to resort to birth control than others. Less than 25 per cent of them, as compared with 45 per cent of the Jewish couples, used contraceptives immediately after marriage, and only 65 per cent, as compared with 87 per cent of the Jewish couples, had started to use them prior to their second pregnancy. Corresponding figures for the "Protestant and Other" group fall midway between those for Catholics and Jews.

Another aspect of the varying reactions of different religious groups to birth control is reflected in Table 1, which shows the proportion of contraceptive practice in the total experience of each group. Since our records give the history of contraceptive practice preceding each pregnancy, it is possible to classify each woman's exposure to the risk of pregnancy³ into three types:

³Exposure to risk of pregnancy is the time during which the woman was living with her husband and not pregnant. It will be defined in more detail later.

(1) Exposure during which contraception was habitually practiced; (2) that during which the couple temporarily interrupted contraceptive practice in order to have a baby; and (3) that during which the couple habitually used no contraceptive. Jewish couples had the largest proportion of exposure during which contraceptives were used, Catholics the smallest, and the experience of "Protestants and Others" fell between the two. Conversely, Catholics had the largest proportion of habitual non-contraceptive exposure and Jews the smallest. The Jewish exposure, however, included more of the temporary non-contraceptive practice than that of the other religious groups. Examination of the proportion of pregnancies occurring in each type of exposure is even more revealing (Table 2). In all religious groups, more than half of the pregnancies were accidental, but nearly 25 per cent of those in Jewish families were deliberately planned, while the proportion of "planned" pregnancies in the Catholic group was only 8 per cent, and in the "Protestant and Other" group, 11 per cent. The women who used contraception for the largest proportion of their exposure, planned the most pregnancies.

As would be expected, the practice of contraception became more common as marriage lengthened. This is apparent from each of the five sets of bars in Figure 1. Each set represents the experience of women married a different length of time at their

Table 2. Proportion of total pregnancies occurring when contraception was used and when none was used, for each religious group.

RELIGION	TOTAL NUMBER OF PREG- NANCIES	PER CENT OF TOTAL NUMBER OF PREGNANCIES				
		Total	Contra- ceptives Used	No Contraceptives Used		
				Total	Tempo- rarily	Habitually
TOTAL	3,072	100.0	53.2	46.8	18.1	28.8
Catholic	640	100.1	53.8	46.3	8.0	38.3
Jewish	1,959	100.0	52.5	47.5	23.0	24.5
Protestant and Other	473	100.0	55.2	44.8	11.2	33.6

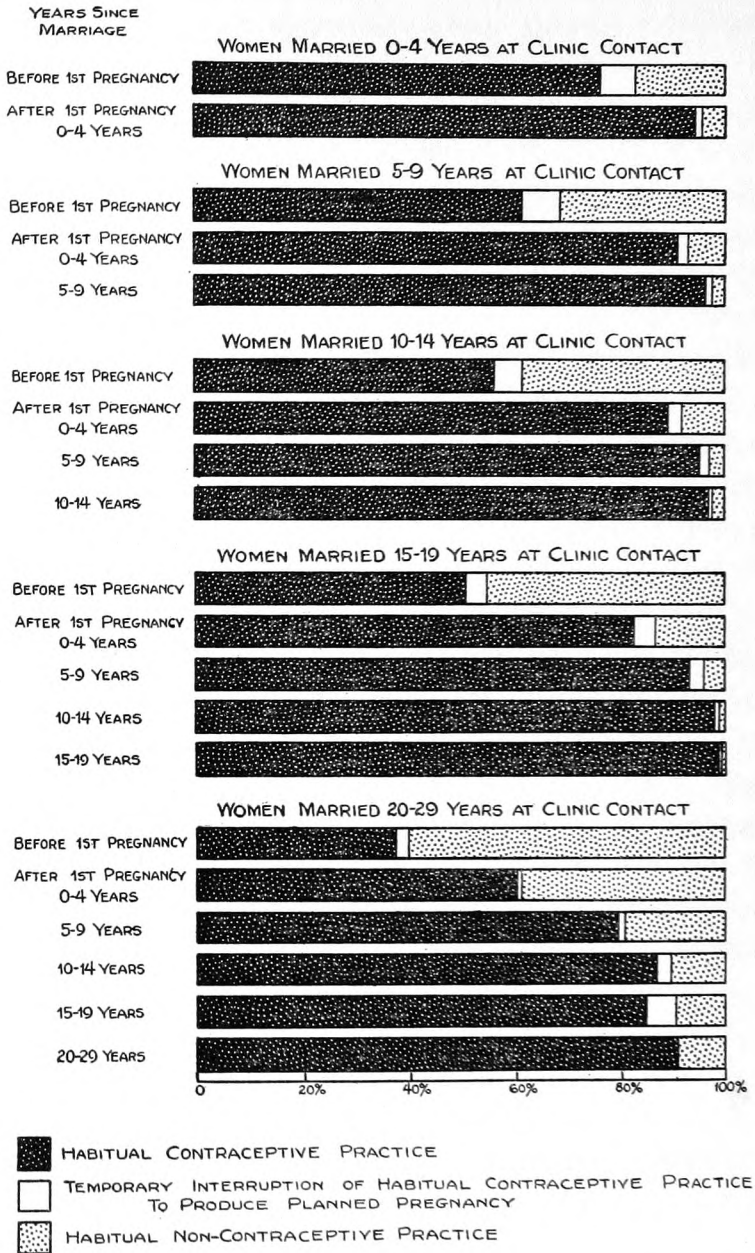


Fig. 1. Showing, for women who had been married different lengths of time at clinic contact, the proportions of total exposure during which contraceptives were used and during which none were used, in each period of married life.

first contact with the clinic. Within each set, the top bar relates to the exposure immediately after marriage, and the bottom bar to that just prior to the clinic visit. The proportion of time contraception was practiced, represented by the darkest sections, increased rapidly after the first pregnancy for each group of women.

The trend toward an increasing popular acceptance of birth control is also reflected in Figure 1, and may be seen by comparing the darkest parts of corresponding bars of each set. Those of the bottom set, representing marriages contracted between 1900 and 1910, show the smallest proportion of contraceptive practice, and those of the top set, representing the most recent marriages, show the largest. It is clear that the early practice of birth control has become increasingly common in the last twenty-five years.

METHOD OF COMPUTING PREGNANCY RATES

In this article, as in our previous one, pregnancy rates are presented for each of the three general types of exposure to the risk of pregnancy listed above.⁴ We wish to emphasize the fact that the experience of any woman may fall into one or all of these categories. The pregnancy rates for each type of exposure are not based on the experience of different women but on different types of experience of the same women. Each rate, therefore, represents the aggregate number of pregnancies resulting from 100 years of exposure of one type for the whole group.

In order to interpret the rates it will be necessary to bear in mind the characteristics of each of these three types of exposure:

(1) Exposure during which contraceptives were habitually used. The pregnancies resulting from this exposure were all "accidental," being due to careless omission of contraceptive practice,

⁴A woman is presumed to be exposed to the risk of pregnancy when she is living with her husband and not pregnant. We have, therefore, deducted from the total months of each woman's married life: (1) All separations of husband and wife of more than one month's duration, and (2) the actual number of months of gestation for each pregnancy, plus a month or a fraction of a month for the puerperal period following it. The time remaining is the total exposure to the risk of pregnancy.

See also: *Op. Cit.*, Stix and Notestein, footnotes 5, 6, and 7.

to error in technique of use, or to defect in the contraceptive itself.

(2) Exposure during which contraceptive practice was temporarily interrupted in order to produce pregnancy. This includes only the time from the cessation of contraceptive practice to conception. The pregnancies resulting were "planned." It is charac-

Table 3. Pregnancy rates when contraceptives were used and when none were used, (a) temporarily and (b) habitually.

NUMBER OF YEARS OF EXPOSURE AND NUMBER OF PREGNANCIES						
YEARS SINCE MARRIAGE	CONTRACEPTIVES USED		NO CONTRACEPTIVES USED			
	Exp. Years	No. Preg.	Temporarily		Habitually	
			Exp. Years	No. Preg.	Exp. Years	No. Preg.
1st pregnancy	423.7	174	41.8	196	202.1	542
2nd and succeeding pregnancies						
TOTAL	5,317.6	1,459	79.2 ¹	344 ¹	326.0	342
0-4	1,961.1	634	41.2	173	197.4	226
5-9	2,019.9	536	32.0	145	81.2	79
10-14	978.7	236	5.8	24	28.5	23
15-19	302.3	48	0.2	2	14.5	11
20-29	55.6	5	—	—	5.7	3

PREGNANCIES PER 100 PERSON-YEARS EXPOSURE			
YEARS SINCE MARRIAGE	CONTRACEPTIVES USED	NO CONTRACEPTIVES USED	
		Temporarily	Habitually
1st pregnancy	41	469	168
2nd and succeeding pregnancies			
TOTAL	27	434	105
0-4	32	420	114
5-9	27	453	97
10-14	24	414	81
15-19	16	— ²	76
20-29	9	—	53

¹This represents the total exposure and pregnancies of 277 women. Since we are primarily interested in determining the rate at which normal women conceive, we have excluded from this experience the exposure and pregnancies of thirteen cases, in which there were severe pathological conditions interfering with conception, which were later corrected. The pregnancy rate for temporary non-contraceptive exposure, for this group, was 51. Examples of the cases deleted are:

Case No. 608. Husband impotent because of severe endocrinopathy. Conception followed proper endocrine therapy. Exposure 24 months, 1 pregnancy.

Case No. 990. Conceived only after correction of a marked retroversion, cauterization of cervix and inflation of tubes. Exposure 51 months, 1 pregnancy.

²Less than one year of exposure.

teristic of this type of exposure that it does not include periods of lactation or other postpartum protection. In general, such exposure occurs when conditions are most favorable for conception.

(3) Exposure during which there was habitually no contraceptive practice. Pregnancies resulting from this exposure may be presumed to occur at a normal "biological" rate since the exposure includes those protective periods which normally occur after pregnancy and during lactation. The exposure included is that from marriage until contraceptive practice began. In some cases the time was short, even as little as one month; in a few cases it included all of the exposure during the first twenty years of married life.

The rates and the data upon which they are based are shown for each type of exposure in Table 3. Those for first pregnancies are shown separately, since exposure to first pregnancy can include no period of lactation or other postpartum protection. Those for second and succeeding pregnancies are shown for five successive periods of married life. It is somewhat reassuring to find that in spite of the addition of data from 277 new records the rates are virtually identical with those presented in our first report.⁵

PREGNANCY RATES WHEN NO CONTRACEPTION WAS USED

The women conceived more rapidly when they stopped the use of contraceptives in order to become pregnant than they did when they habitually used none. This was true both for first pregnancies and for later ones. In the latter case, one cause at least is apparent. By definition, habitual non-contraceptive exposure, after the first pregnancy, includes postpartum protective periods which materially reduce the risk of pregnancy, while temporary non-contraceptive exposure does not. Even for first pregnancy, however, when the data were expressed as distributions of time re-

⁵*Op. Cit.*, Stix and Notestein, Table 3.

quired for conception, the χ^2 test indicated a significant difference. We have no evidence as to the cause of this. Possibly it is due in part to the fact that in many marriages a brief time may elapse before complete entry takes place. For women who have never used contraceptives, this time is included in non-contraceptive exposure, while for women whose non-contraceptive practice is temporary, it is included in exposure while using contraceptives.

The pregnancy rates for habitual non-contraceptive exposure decline as the duration of marriage increases. Further detailed analysis of the data is required before the cause will be clear. It is possible that the more conservative women, who continued to use no contraception in the later durations of married life, nursed their babies longer than the less conservative ones who took up birth control relatively early. It is also possible that the couples who avoided the use of contraceptive longest were less fecund than those who turned to it earlier.

The pregnancy rates for the habitual non-contraceptive exposure of the three religious groups differ very little and probably

Table 4. Pregnancy rates of different religious groups for habitual non-contraceptive exposure.

NUMBER OF YEARS OF EXPOSURE AND NUMBER OF PREGNANCIES								
	ALL RELIGIONS		CATHOLIC		JEWISH		PROTESTANT AND OTHER	
	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.
All 1st pregnancies	202.1	542	46.4	119	119.3	339	36.3	84
Total 2nd and succeeding pregnancies	326.0	342	113.8	126	155.3	141	56.8	75
PREGNANCIES PER 100 PERSON-YEARS EXPOSURE								
	ALL RELIGIONS		CATHOLIC		JEWISH		PROTESTANT AND OTHER	
All 1st pregnancies	268		256		284		231	
Total 2nd and succeeding pregnancies	105		111		91		132	

not significantly (Table 4). In the case of first pregnancies the χ^2 test applied to the distribution of time required for conception indicated that the differences were not significant. The experience relating to second and succeeding pregnancies is small and the crude rates do not differ widely. Standardization reduces the difference still further.

A study of the rates for temporary non-contraceptive exposure shows that contrary to current belief,⁶ the ability of normal women to conceive does not decline with age in the premenopause period. In this type of exposure, we approximate an expression of fecundity. There are no variables, such as differences in length of postpartum protection against pregnancy, or differences in type and extent of contraception. We have excluded the experience of women with known pathological conditions which required extensive medical treatment before conception took place. Briefly, it may be characterized as an expression of the fundamental ability of normal women to conceive.

The rates shown in Table 3 are as high in the later as in the earlier years of married life. Moreover, when the data were expressed as distributions of time required for conception, the χ^2 test showed no significant difference in the distributions for first, second, third, or fourth pregnancies, or for women under 25 years of age as compared with women between 30 and 40 years of age. Regardless of the age of the woman or the order of pregnancy, conception occurred, in about 50 per cent of the cases, within one month, and in about 75 per cent of the cases, within the first three months of non-contraceptive exposure. So far as we know, there are no other data bearing directly on this point. Our results appear to offer for this group a denial of the accepted doctrine that ability to conceive declines with age.⁷ We

⁶See for example: Meaker, Samuel Raynor, M.D.: *HUMAN STERILITY*. Baltimore, Md., Williams and Wilkins, 1934, pp. 54 and 264.

⁷Inferences to the contrary drawn from data gathered in the nineteenth century, on
(Continued on page 172)

may also regard as untrue, as far as our sample is concerned, the long abused dictum that, "For each year of contraceptive practice an additional month is required to induce conception when pregnancy is planned." These women, whose ability to conceive did not decline with age, were, by definition, regular users of contraception.

If ability to conceive does not decline with age among normal women, why does overt fertility do so? Birth rates everywhere fall off rapidly with increasing age. The answer is found in a multiplicity of causes, such as: (1) The increasing use of contraceptive methods as the wife gets older, (2) improvement in contraceptive practice, (3) higher incidence of induced abortions in late pregnancies,⁸ and (4) the increase of pelvic, endocrine, and other pathology with age. From the data presented in Table 3, it appears that increasing use and effectiveness of contraception are the most important factors in reducing the fertility of women as they grow older.

TYPES OF CONTRACEPTION USED

Before considering the effectiveness of contraceptive practice for this group of women, it is important to learn what contraceptives they used. The methods most frequently used were coitus interruptus, condom, and douche, in the order named. There was sufficient experience with alternate use of condom and coitus interruptus to classify this type of exposure separately. All other methods have been considered under one heading as "Other C+."⁹ Table 5 shows the proportion of the total contraception that at that time was not generally used, must be accepted with caution, in view of the relatively high degree of effectiveness of coitus interruptus shown in Table 8. See for example: Bromley, Dorothy Dunbar: *BIRTH CONTROL, ITS USE AND MISUSE*. New York and London, Harper and Brothers, 1934, p. 223.

⁸Kopp, Marie: *BIRTH CONTROL IN PRACTICE*. New York, McBride, 1934, Table XIII. Preliminary unpublished studies of our material show similar results.

⁹This includes safe-period, suppository, jelly, pessary, sponge, intra-uterine device, et cetera, as well as alternation of methods not provided for in any of the first four categories. It will be noted that these are mainly contraceptives for which the wife is responsible.

RELIGION	TOTAL C + EXPOSURE (Years) ¹	PER CENT					
		Total C +	Condom	Coitus Interruptus	Condom or Coitus Interruptus ²	Douche ³	Other C +
TOTAL	5,740.4	100.1	31.5	36.4	14.6	5.4	12.2
Catholic	738.0	100.1	21.3	40.3	10.1	15.4	13.0
Jewish	4,262.1	100.0	32.4	38.7	16.0	2.3	10.6
Protestant & Other	740.3	99.9	35.9	19.6	10.6	13.2	20.6

¹Total exposure while using contraceptives.

²Alternating.

³Plain or medicated.

Table 5. Proportion of each type of contraceptive practice in the total exposure to pregnancy during which contraceptives were used, for each religious group.

traceptive exposure during which each of these types of contraception was used, for the whole group and for each religious group.

The choice of contraceptives varied with religion. Coitus interruptus alone was the method most frequently used by both the Catholic and Jewish families, but the second choice of Catholic couples was douche, while that of Jewish couples was condom. The "Protestant and Other" group used condom most frequently. Jewish couples showed an overwhelming tendency to place the responsibility for birth control on the male partner. Coitus interruptus and condom constituted nearly 90 per cent of their total exposure during which contraceptives were used. While in the Catholic group also, the responsibility fell largely upon the husband, it is interesting to note that during more than half of the Catholic experience with contraceptives, either coitus interruptus or douche was used. The use of these two methods requires no equipment which is not found in an ordinary household, and they can therefore be used without recourse to any agency outside the home.

EFFECTIVENESS OF CONTRACEPTION

A comparison of pregnancy rates during contraceptive practice with those occurring when no contraceptives were used

(Table 3) makes it clear that the use of contraceptives materially reduces pregnancy rates. The extent to which each type of contraception is thus effective is shown in Table 6. The rates for different contraceptives are consistently different in all durations of married life. Rates for condom are lowest and those for douche highest. Figures for the other types of contraception lie between these two extremes. Rates for each method decline with advancing duration of marriage. This trend may be due to two factors, (1) increasing aptitude in the use of a contraceptive as time

Table 6. Pregnancy rates resulting from exposure while using each type of contraceptive.

NUMBER OF YEARS OF EXPOSURE AND NUMBER OF PREGNANCIES												
YEARS SINCE MARRIAGE	TOTAL C+ ¹		CONDOM		COITUS INTER-RUPTUS		CONDOM OR COITUS INTER-RUPTUS ²		DOUCHE ³		OTHER C+	
	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.
1st pregnancy 2nd and succeeding pregnancies	423.7	174	189.9	55	100.1	44	45.2	18	38.6	31	49.9	26
TOTAL	5,317.6	1,459	1,615.9	307	1,990.4	571	791.1	220	269.3	144	650.9	217
0-4	1,961.1	634	662.7	158	690.1	222	295.5	95	91.0	67	221.8	92
5-9	2,019.9	536	622.4	105	715.6	212	299.8	86	106.7	44	275.4	89
10-14	978.7	236	271.3	39	388.9	104	155.4	33	53.0	28	110.1	32
15-19	302.3	48	56.7	5	160.3	30	33.4	6	15.7	5	36.2	2
20-29	55.6	5	2.8	0	35.5	3	7.0	0	2.9	0	7.4	2

PREGNANCIES PER 100 PERSON-YEARS EXPOSURE

1st pregnancy 2nd and succeeding pregnancies	41	29	44	40	80	52
TOTAL	27	19	29	28	53	33
0-4	32	24	32	32	74	41
5-9	27	17	30	29	41	32
10-14	24	14	27	21	53	29
15-19	16	9	19	18	32	6
20-29	9	0	8	0	0	27

¹All types of contraception combined.

²Alternating.

³Plain or medicated.

passed, and (2) the fact that women who became pregnant while using a given contraceptive frequently changed to one better suited to their needs, thus leaving a predominance of successful users of the first method.

There was a consistent difference in pregnancy rates when a specific contraceptive was used by different religious groups. In Table 7 we have a comparison of crude rates for second and succeeding pregnancies for each type of contraceptive by religion. Standardization of these rates does not alter them significantly. For each contraceptive and for all contraceptive experience combined, the rates for Catholics are much higher than the rates for Jews and those for the other religious groups fall between. We have no theory which will account for differences in pregnancy rates of Jews and Protestants. Further study of a larger Protestant

Table 7. Crude pregnancy rates for second and succeeding pregnancies by types of contraceptive practice, for each religious group.

NUMBER OF YEARS OF EXPOSURE AND NUMBER OF PREGNANCIES								
TYPE OF CONTRACEPTION	ALL RELIGIONS		CATHOLIC		JEWISH		PROTESTANT AND OTHER	
	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.	Exp. Years	No. Preg.
TOTAL C + ¹	5,317.6	1,459	696.6	319	3,960.9	919	660.1	221
Condom	1,615.9	307	143.2	50	1,234.5	199	238.2	58
Coitus Interruptus	1,990.4	571	282.7	129	1,571.5	403	136.2	39
Condom or Coitus In- terruptus ²	791.1	220	74.7	22	641.5	168	74.9	30
Douche ³	269.3	144	100.5	73	86.4	33	82.4	38
Other C +	650.9	217	95.5	45	427.0	116	128.4	56
PREGNANCIES PER 100 PERSON-YEARS EXPOSURE								
TOTAL C + ¹	27		46		23		33	
Condom	19		35		16		24	
Coitus Interruptus	29		46		26		29	
Condom or Coitus In- terruptus ²	28		29		26		40	
Douche ³	53		73		38		46	
Other C +	33		47		27		44	

¹All types of contraception combined.

²Alternating.

³Plain or medicated.

group should throw some light on this matter. The religious ban on contraceptives may be responsible for the consistently high Catholic rates. Conscience may account for more frequent omissions as well as less careful use of a contraceptive in a group in which there may be an underlying sense of guilt when contraceptives are used.

A single figure, summarizing the effectiveness of each contraceptive as actually used, may be obtained by estimating the proportion of pregnancies prevented by the use of the method. For this purpose, we assume that if the women who used a contraceptive had never used any, they would have become pregnant at the same rate as did those women who actually never used contraception. By applying the rates for habitual non-contraceptive exposure to the corresponding exposures during which the

method was used, we can estimate the number of pregnancies which we should expect under these conditions. The difference between this expected number and the actual number of pregnancies which resulted during the use of the contraceptive gives an estimate of the number of pregnancies avoided. This figure, expressed as per cent of expected pregnancies, yields an estimated ratio of effective-

ness. The ratio is based on equal units of exposure to risk, which should not be confused with equal units of married life. Contraception, by its success in preventing pregnancy, increases the time during which a woman is not pregnant and therefore

Table 8. Relative effectiveness of specific contraceptives.

Type of Contraception	Ratio of Effectiveness ⁴
TOTAL C + ¹	74
Condom	83
Coitus Interruptus	72
Condom or Coitus Interruptus ²	74
Douche ³	52
Other C +	69

¹All contraception combined.

²Alternating.

³Plain or medicated.

⁴Ratio of avoided to expected pregnancies. The expected pregnancies were calculated by applying pregnancy rates for habitual non-contraceptive exposure to corresponding exposures for each type of contraceptive practice. The difference between observed and expected pregnancies yields an estimate of the number of pregnancies avoided. Virtually identical results were obtained by using pregnancy rates standardized to the distribution of exposure presented for all contraceptive practice combined in Table 3.

exposed to the risk of pregnancy. Conversely, the length of exposure of the woman who uses no contraceptives is lessened in proportion to the increase in the amount of time she is pregnant. The ratio of effectiveness of each method is shown in Table 8.

For a given period of exposure to risk of pregnancy, condom was about 83 per cent effective in preventing pregnancy, while douche prevented only 52 per cent of the pregnancies which would have occurred had no contraceptive been used. Other methods were less effective than condom, but more effective than douche. It must be remembered that these ratios do not represent the highest possible effectiveness of the contraceptives studied, but simply their effectiveness as actually used by a particular group of people.

SUMMARY

This paper presents a detailed study of the reproductive behavior of a selected group of women who attended a birth control clinic in New York City. It concerns only the pre-clinic period of their married life. The conclusions follow:

1. Virtually all of the women practiced contraception before attending the clinic. One-half of their pregnancies were "accidental," but nearly one-fifth were deliberately planned. Catholic couples were less willing to resort to birth control than Jewish couples, but the Jewish women had a much larger proportion of "planned" pregnancies than the Catholics.

2. When the women interrupted contraceptive practice in order to become pregnant, they conceived as rapidly after more than ten years of married life as they did when first married, and the ability to conceive did not decline with age or increasing order of pregnancy, in the pre-menopause period.

3. In all periods of married life, the use of contraceptives materially reduced pregnancy rates. The proportion of contraceptive practice increased with lengthening duration of marriage.

4. Pregnancy rates for each type of contraceptive practice decreased as the marriage lengthened.

5. The effectiveness of contraception varied with the method used. For a given period of exposure to risk, condom, the best of the methods studied, was about 83 per cent effective in preventing pregnancy, while douche, the least effective, reduced the risk of pregnancy only about 52 per cent.

6. All contraceptives were less effective when used by Catholics than when used by people of other religious affiliations. For this group, contraception was most effective when used by Jewish couples.